## MATHEMATICS

Class: IX
MAX. MARKS: 20
Date: 24-05-2022
DURATION: 45 MINS
General Instructions:
a. All questions are compulsory.
b. Section A comprises 1 question of 1 mark, Section B comprises 3 questions of $\mathbf{2}$ marks each and Section $C$ comprises 3 questions of 3 marks each.

## SECTION A

1. If $x^{2}=196$ then $x$ is
(a) a irrational number
(b)a rational number
(c)neither rational nor irrational (d) none of these
2. If $x=3+\sqrt{8}$ then value of $\frac{1}{x}$ is
(a) $3+\sqrt{8}$
(b) $3-\sqrt{8}$
(c) $\sqrt{8}-3$
(d) 1
3. $\sqrt{6} \times \sqrt{8}$ is equal to
(a) $6 \sqrt{8}$
(b) $3 \sqrt{4}$
(c) $4 \sqrt{3}$
(d) 48
4. The $X$-coordinate of a point is the distance of that point from
(a) $Y$ - axis
(b)origin
(c) $X$ - axis
(d) none of these
5. The perpendicular distance of the point $(-4,-3)$ from $Y$ - axis is
(a) -4
(b) 3
(c) 4
(d) -3

## SECTION B

6. Express $0.12 \overline{3}$ in the form $p / q$, where $p$ and $q$ are integers, $q \neq 0$
7. If the coordinates of the points $P$ and $Q$ are $P(-2,3)$ and $Q(-3,5)$, then find the value of (abscissa of $P$ ) - (ordinate of $Q$ )
8. If $2^{5 x} \div 2^{x}=\sqrt[5]{32}$, then find the value of " $x$ "

OR
Evaluate: $\left(p^{a-b}\right)\left(p^{b-c}\right)\left(p^{c-a}\right)$

## SECTION C

9. Simplify: $12 \sqrt{18}-6 \sqrt{20}-3 \sqrt{50}+8 \sqrt{45}$.
10. In which quadrant/axis the following points lie
(a) $(-4,-5)$
(b) $(5,-4)$
(c) $(-5,0)$
11. If $x+y \sqrt{3}=\frac{\sqrt{3}-1}{\sqrt{3}+1}$ find the values of " $x$ " and " $y$ "

OR
If $x=9+4 \sqrt{5}$, find the value of $\left(\sqrt{x}-\frac{1}{\sqrt{x}}\right)$

